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Quality and effectiveness in greek primary school

Thomas Babalis^a, Konstantina Tsoli^b, Christina Koutouvela^c, Nektarios Stavrou^d,
Nikolaos Alexopoulos^e^{a, b, c, e} National and Kapodistrian University of Athens, Faculty of Primary Education, Navarinou 13A & Mavromixali, 10680, Greece^dNational and Kapodistrian University of Athens, Faculty of Physical Education and Sports Science, Ethnikis Antistasis 41, 17237, Greece

Abstract

Purpose of this study was to investigate the views of teachers and headmasters about the effectiveness levels of greek primary school. The questions posed were related to: a) school plan for effectiveness, b) teacher behavior. The research methodology was organized by: a) literature review and b) field research. Research results showed that there is a direct dependence of ensuring the quality and effectiveness of a school with the: a) school plan for effectiveness, b) teacher behavior. There is scope for improvement of the provided pedagogical and teaching work, as seen from the results of our research.

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1. Main text

1. Introduction

The concepts of 'effectiveness' and 'quality' in education are increasingly gaining ground worldwide (Reynolds et al., 2011). Many definitions have been given to these two terms, while many research findings frame them (Muijs et al., 2011). The purpose of this type of research is the investigation of those mechanisms that make the classroom, the school unit and the educational system to materialize fully, successfully and efficiently targets set by the official curriculum (Creemers, 1994).

Nowadays "quality in education" is a key concept and is closely connected to the concept of 'effectiveness'. When thus "negative data" relate to the "system quality", this is then connected with system's effectiveness.

Actually these terms are so broad and fundamental simultaneously, and their definition is still a challenge as they are directly dependent on the particular socio-historical circumstances and political choices.

So, they are defined by many criteria, featured in numerous theoretical and practical approaches, and framed by various factors.

* Corresponding author. Tel.: +30-210-3688463; fax: +30-210-3688464.

E-mail address: tbabalis@primedu.uoa.gr.

Among these factors there are two key persons, the teacher and the headmaster of the school (Iordanides, Lazaridou & Babaliki, 2011; Sammons, Hillman & Mortimore, 1995). Bogotch et al. (2007) pose the following question: effective for whom and effective for what?

In this research the views-voices of teachers and headmasters are being investigated regarding the effectiveness levels of Greek primary school. In particular the questions posed for investigation are related to: a) school plan for effectiveness, b) physical environment, c) teacher behavior and d) the school's system. criteria under which quality levels of each school have been tested according to the perspective of headmasters on one side, and according to the perspective of teachers, on the other. This tool had been used as both the effectiveness and quality in education are two very "open" conditions that require a clear demarcation in a research project to be investigated comprehensively.

It is noteworthy that a series of research are carried out worldwide, which either:

a) have as objects of study teacher and headmaster, considering them as key persons in the educational activities (Babaliki, 2011; Schneider & Hollenczer, 2006), or

b) are based on the pedagogical aspects of such persons, through the convergence or divergence of which conclusions are drawn on the matter to be investigated (Good and Brophy, 1986; Brookover & Lezotte, 1979)

This research goes into both these areas as a) it presents views of teachers and headmasters drawing conclusions by the comparison of the positions which is presupposed and b) it has as an object of study these persons and their interactions.

Moreover, discussing the terms of "quality", "quality assurance" and "effectiveness" in education it would be a remiss if we did not refer to the headmaster. The headmaster, responsible for the proper operation of the school, for the coordination of school life, for the observance of the rules, for the implementation of the decisions of teachers' association, but also as a supervisor, has to, initially, develop effective communication with their subordinates, creating thus a favorable climate of cooperation that will promote the effectiveness of the school (Saitis, 2002). The favorable climate of cooperation, the headmaster's and teacher's interactions (Emmons, Comer & Haynes, 1996), the viewpoint of one and the other for both the school to which they belong and the methods and tactics (Day et al., 2009) used by each of them are been investigated in this research composing an original study for the Greek standards, the results of which will be used as a source of information for monitoring the quality and effectiveness of the provided educational and teaching work.

2. Method

Participants: A sample of one hundred and twenty nine (129) teachers (326 boys, 53.2%; 287 girls, 46.8%) and twenty four (24) headmasters volunteered to participate in this study. Thirty eight (38, 24.8%) were males and one hundred and fifteen (115, 75.2%) were females. Twelve (12, 7.8%) participants were aged between 20 to 29 years old, nineteen (19, 12.4%) participants' age ranged between 30 to 39 years old, ninety eight (98, 64.1%) participants aged from 40 to 49 years old, and finally twenty four (24, 15.7%) participants were older than 50 years old. Their experience ranged from two (2) to thirty four (34) years with a mean of approximately eighteen years ($M = 18.25$, $SD = 7.20$).

Instrumentation: Checklist for the Assessment of the Quality of Classroom and School Climate. The Checklist for the Assessment of the Quality of Classroom and School Climate consists of four dimensions (Creemers & Reezigt, 2005). The first dimension refers to the school plan for effectiveness; the second dimension refers to physical environment; the third to the teacher behaviour and the fourth to the school's system. For the purposes of the present study, two dimensions will be examined: (a) school plan for effectiveness and (b) teacher behaviour. The subdimensions of the school plan for effectiveness were: (1) cognitive student outcomes and (b) affective student outcomes. On the other hand the subdimensions of teacher behaviour were the followings: (1) relaxed classroom climate, (2) interest and feedback, (3) discipline and (d) self-discovered learning.

Demographics: A questionnaire was developed to obtain demographic information, such as teachers' and headmasters' gender, class, and age.

Procedure of data collection: The participants were recruited from various Greek schools by contacting the teachers and headmasters, visiting their schools. They were informed about the purpose of the study, the assessment, and the procedure of data collection. The participants were asked to voluntarily participate and they completed a consent form, being informed about the confidentiality of the data. The teachers and headmasters completed the Checklist for the Assessment of the Quality of Classroom and School Climate. The headmasters were those of the teachers that participated in the study. All the necessary instructions were given to the headmasters and teachers

during the completion of the questionnaire, as well as, their questions were answered. The total duration of data collection was three months.

Statistical Analyses: Statistical analyses of the data were divided into two phases. The first phase consisted of preliminary data analysis in order to satisfy the assumptions of the main analyses which comprised the second phase. In order to satisfy the assumptions for conducting multivariate and univariate analysis of variance, data screening (univariate distribution, multivariate distribution, Mahalanobis distance values, Levene's test, F_{\max} ratio values, Box's M test) was performed prior to main data analysis (Tabachnick & Fidell, 2006). Also, Cronbach's α coefficient was used to examine the internal reliabilities of the CLM subscales.

In the second phase, univariate and multivariate statistical analyses were conducted to address the main purposes of the present study. In order to examine whether students differed significantly in the CLM subscales during competition, multivariate analysis of variance (MANOVA) was conducted. Follow-up univariate ANOVAs were performed on the subscales where there were significant MANOVA effects (Scheffe test). In addition, Bonferroni adjustment was applied to control for the inflation of Type I error (Tabachnick & Fidell, 2006). Gender differences were also examined. To examine the relationships among the variables, Pearson r correlation analysis was used. To test the internal consistency, the Cronbach's α coefficient for each factor was examined. For an acceptable internal consistency the Cronbach's α (Cronbach, 1951) coefficient should exceed .70 (Tabachnick & Fidell, 2006).

3. Results

Reliability analysis: The internal consistency indices are provided in Table 1. The Cronbach's alphas of the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions the reliability indices ranged from .61 to .85, providing acceptable internal consistency (Table 2). However, some subscales showed a reliability or alpha value less than the recommended .70 (Nunnally, 1978). Given the small number of items forming the factors, the internal validity observed can be marginally accepted (Hair, Anderson, Tatham, & Black, 1998; Nunnally & Bernstein, 1994).

Table 1. Internal Consistency (Cronbach α) indices of Checklist for the Assessment of the Quality of Classroom and School Climate dimensions

Checklist for the Assessment of the Quality of Classroom and School Climate	Cronbach α
Cognitive student outcome	.69
Affective student outcome	.85
Relaxed classroom climate	.66
Interest – Positive feedback	.68
Discipline	.61
Self-discovered learning	.69

The means, the standard deviations and the differences between teachers and headmasters of the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions are provided in Table 2. The results indicated significant differences between the two groups (teachers, headmasters). Specifically, the headmasters showed higher mean values compared to the teachers in the factors of Checklist for the Assessment of the Quality of Classroom and School Climate.

Table 2. Means (M), standard deviations (SD) and differences (t-values) between teachers and headmasters of the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions

	Teachers	Headmasters	
	<i>M/SD</i>	<i>M/SD</i>	<i>t</i>
Cognitive student outcome	0.90 (0.18)	0.97 (0.10)	-2.858**
Affective student outcome	0.93 (0.19)	0.99 (0.04)	3.328***
Relaxed classroom climate	0.96 (0.13)	0.99 (0.04)	-2.117*
Interest – Positive feedback	0.92 (0.20)	0.97 (0.08)	-2.051*
Discipline	0.87 (0.18)	0.91 (0.16)	-1.119
Self-discovered learning	0.90 (0.19)	0.99 (0.05)	-4.580***

* $p < .05$, ** $p < .01$, *** $p < .001$

In Table 3 are presented the means, the standard deviations and the differences between males and females in the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions are provided in Table 2. The results indicated significant differences between the males and females in the relaxed classroom climate.

Table 3. Means (M), standard deviations (SD) and differences (t-values) between males and females of the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions

	Males	Females	
	<i>M/SD</i>	<i>M/SD</i>	<i>t</i>
Cognitive student outcome	0.94 (0.13)	0.90 (0.18)	1.562
Affective student outcome	0.95 (0.14)	0.93 (0.19)	.630
Relaxed classroom climate	0.99 (0.05)	0.96 (0.13)	2.114*
Interest – Positive feedback	0.93 (0.14)	0.93 (0.20)	.080
Discipline	0.89 (0.16)	0.87 (0.18)	.803
Self-discovered learning	0.94 (0.15)	0.90 (0.18)	1.419

* $p < .05$, ** $p < .01$, *** $p < .001$

Correlational analysis: Significant intercorrelations were found among the Checklist for the Assessment of the Quality of Classroom and School Climate subscales (Table 4.) at the teachers sample. The factors indicated low to medium value intercorrelations, ranging from .27 to .61. The correlations between relaxed classroom climate and affective student outcome ($r = .61$) as well as interest – positive feedback ($r = .52$) were the higher in teachers sample.

Table 4. Intercorrelations (Pearson r) between the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions at the teachers sample

	1.	2.	3.	4.	5.	6.
1. Cognitive student outcome	1.00	.46***	.47***	.27**	.44***	.32***
2. Affective student outcome		1.00	.61***	.36***	.33***	.19*
3. Relaxed classroom climate			1.00	.52***	.37***	.45***
4. Interest – Positive feedback				1.00	.35***	.40***
5. Discipline					1.00	.45***
6. Self-discovered learning						1.00

* $p < .05$, ** $p < .01$, *** $p < .001$

Significant intercorrelations were found among the Checklist for the Assessment of the Quality of Classroom and School Climate subscales (Table 4.) at the headmasters sample. The factors indicated low to high value intercorrelations, ranging from -.12 to .95. The correlations between discipline and cognitive and affective student outcome ($r = .74$ and $r = .81$) were the higher as well as Self-discovered learning and cognitive and affective student outcome ($r = .64$ and $r = .69$) in headmasters sample (Table 3).

Table 5. Intercorrelations (Pearson r) between the Checklist for the Assessment of the Quality of Classroom and School Climate dimensions at the headmasters sample

	1.	2.	3.	4.	5.	6.
1. Cognitive student outcome	1.00	.95***	.44*	-.09	.74***	.64**
2. Affective student outcome		1.00	.50*	-.07	.81***	.69***
3. Relaxed classroom climate			1.00	.55**	.43*	-.07
4. Interest – Positive feedback				1.00	.28	-.12
5. Discipline					1.00	.63***
6. Self-discovered learning						1.00

* $p < .05$, ** $p < .01$, *** $p < .001$

4. Discussion-Conclusion

The results showed statistically significant differences between teachers and headmasters concerning the factors of Checklist for the Assessment of the Quality of Classroom and School Climate dimensions. In particular, headmasters had higher mean values than the corresponding average values of the educational factors of the tool. In other words, headmasters consider that there is a higher effectiveness compared to school teachers and also note a more positive view on the attitude and behavior of teachers working in schools.

On the other hand no statistically significant differences emerged between the two sexes, except for the fact that men claim in a higher level, in comparison to women, that there is a relaxed classroom climate.

The results of correlation analysis among the dimensions of the Checklist for the Assessment of the Quality of Classroom and School Climate showed the existence of significant correlations. In particular, the achievement of affective student outcome combined with the emergence of cognitive student outcome, and the affective student outcome combined with relaxed classroom climate indicate that a calm atmosphere in the classroom leads to more positive emotional outcomes of students, according to teachers and headmasters, as well. It also appeared high correlation between the relaxed classroom climate and interest - positive feedback indicating that teachers feel that these two concepts are related significantly to each other, where a calm learning environment can be combined to provide positive feedback to students. Finally, self-discovered learning appears to be related and may be affected by the presence of a calm learning environment, according to the opinions of teachers and of schools where students have the opportunity to test and develop skills, but also self-discovered learning appears to be related to the provision of positive feedback and show keen interest from teacher to student.

The views of teachers and headmasters differ in how six factors interact the one with the other (cognitive student outcome, affective student outcome, relaxed classroom climate, interest – positive feedback, discipline, self-discovered learning); that is due to the fact that their roles differ: the communication with students differs, the interaction with students differs. Teachers develop another type of communication with students. As Babalis (2011) claims teacher should develop true pedagogical relationships based on mutual understanding and mutual respect. They often have a more representative picture of classroom life than headmasters, so the involvement of teachers, for example, in the school decision making process is suggested (Reynolds & Teddlie, 2000).

According to the responses of headmasters there is a significant correlation between cognitive and affective student outcome and factors of discipline and self-discovered learning showing that personal discovery learning, according to the opinions of teachers, contribute to higher cognitive and emotional effects of the students, making the school more effective.

There is a series of research concerning headmasters' and teachers' views such as Pashiardi's (2000) research which focuses on the beliefs of principals and teachers concerning their school's climate. Reeves (2006) points out that school, as a system, needs to be improved. In this research the results revealed teachers'-principals' disagreements and agreements concerning specific dimensions and it is suggested that in order to ensure the improvement of Greek primary school effectiveness policy makers should take into account their voices.

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